

Annual Energy Outlook 2006 with Projections to 2030

Release Date: December 2005

Next Release Date: December 2006

**Table 5. Commercial Sector Key Indicators and Consumption
(quadrillion Btu, unless otherwise noted)**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Key Indicators										
Total Floorspace (billion square feet)										
Surviving	71.6	73.1	74.4	75.6	76.7	77.9	79.1	80.4	81.7	82.9
New Additions	2.1	2.0	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0
Total	73.7	75.0	76.2	77.4	78.6	79.8	81.1	82.3	83.6	84.9
Energy Consumption Intensity (thousand Btu per square foot)										
Delivered Energy Consumption	113.2	109.9	110.7	107.4	107.8	108.4	108.9	109.3	109.8	110.2
Electricity Related Losses	121.6	121.6	124.1	123.2	124.9	126.2	127.1	127.7	127.1	128.0
Total Energy Consumption	234.8	231.5	234.8	230.7	232.8	234.6	236.0	237.0	236.8	238.2
Delivered Energy Consumption by Fuel										
Purchased Electricity										
Space Heating 1/	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16
Space Cooling 1/	0.43	0.41	0.49	0.42	0.42	0.43	0.44	0.44	0.45	0.45
Water Heating 1/	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Ventilation	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Lighting	1.09	1.10	1.10	1.09	1.11	1.13	1.15	1.17	1.20	1.22
Refrigeration	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.23
Office Equipment (PC)	0.13	0.14	0.16	0.19	0.21	0.23	0.23	0.23	0.24	0.25
Office Equipment (non-PC)	0.27	0.31	0.34	0.37	0.39	0.42	0.44	0.46	0.48	0.50
Other Uses 2/	1.48	1.53	1.58	1.62	1.67	1.73	1.78	1.84	1.90	1.95
Delivered Energy	4.09	4.19	4.37	4.39	4.51	4.65	4.77	4.88	5.00	5.11
Natural Gas										
Space Heating 1/	1.27	1.20	1.18	1.22	1.23	1.26	1.28	1.30	1.32	1.34
Space Cooling 1/	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02
Water Heating 1/	0.55	0.54	0.53	0.52	0.52	0.52	0.53	0.53	0.54	0.56
Cooking	0.26	0.26	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.30
Other Uses 3/	1.23	1.07	1.13	1.00	0.99	1.01	1.03	1.05	1.07	1.09
Delivered Energy	3.32	3.09	3.10	3.01	3.02	3.08	3.13	3.18	3.24	3.30
Distillate										
Space Heating 1/	0.21	0.19	0.20	0.20	0.20	0.21	0.21	0.22	0.22	0.22
Water Heating 1/	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Other Uses 4/	0.20	0.24	0.25	0.21	0.20	0.20	0.20	0.20	0.20	0.20
Delivered Energy	0.48	0.50	0.51	0.47	0.46	0.47	0.48	0.48	0.48	0.49
Marketed Renewables (biomass)										
Other Fuels 5/	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Delivered Energy Consumption by End Use										
Space Heating 1/	1.63	1.55	1.52	1.57	1.59	1.62	1.65	1.67	1.70	1.72

Table 5. Commercial Sector Key Indicators and Consumption
 (quadrillion Btu, unless otherwise noted)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Space Cooling 1/	0.44	0.42	0.51	0.43	0.43	0.44	0.45	0.46	0.46	0.47
Water Heating 1/	0.76	0.75	0.73	0.72	0.72	0.72	0.73	0.73	0.75	0.76
Ventilation	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18
Cooking	0.29	0.29	0.29	0.29	0.29	0.30	0.31	0.32	0.32	0.33
Lighting	1.09	1.10	1.10	1.09	1.11	1.13	1.15	1.17	1.20	1.22
Refrigeration	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.23	0.23
Office Equipment (PC)	0.13	0.14	0.16	0.19	0.21	0.23	0.23	0.23	0.24	0.25
Office Equipment (non-PC)	0.27	0.31	0.34	0.37	0.39	0.42	0.44	0.46	0.48	0.50
Other Uses 6/	3.36	3.31	3.41	3.28	3.34	3.40	3.48	3.55	3.63	3.71
Delivered Energy	8.34	8.24	8.43	8.31	8.47	8.65	8.83	9.00	9.18	9.36
Electricity Related Losses	8.96	9.13	9.46	9.53	9.82	10.07	10.30	10.51	10.63	10.87
Total Energy Consumption by End Use										
Space Heating 1/	1.97	1.87	1.84	1.91	1.93	1.96	1.99	2.02	2.04	2.06
Space Cooling 1/	1.39	1.32	1.57	1.33	1.35	1.38	1.40	1.41	1.41	1.42
Water Heating 1/	1.06	1.06	1.04	1.02	1.02	1.03	1.03	1.04	1.05	1.07
Ventilation	0.52	0.53	0.52	0.52	0.53	0.53	0.54	0.54	0.54	0.55
Cooking	0.36	0.36	0.35	0.36	0.36	0.37	0.38	0.38	0.39	0.40
Lighting	3.48	3.51	3.47	3.47	3.51	3.57	3.64	3.70	3.74	3.81
Refrigeration	0.65	0.66	0.66	0.67	0.68	0.69	0.70	0.71	0.71	0.72
Office Equipment (PC)	0.41	0.44	0.52	0.60	0.68	0.71	0.73	0.74	0.75	0.77
Office Equipment (non-PC)	0.86	0.99	1.08	1.17	1.25	1.33	1.40	1.46	1.51	1.57
Other Uses 6/	6.61	6.64	6.83	6.80	6.98	7.16	7.33	7.52	7.66	7.86
Total	17.30	17.37	17.89	17.84	18.29	18.72	19.13	19.51	19.81	20.23
Non-Marketed Renewable Fuels										
Solar 7/	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

Table 5. Commercial Sector Key Indicators and Consumption
 (quadrillion Btu, unless otherwise noted)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Key Indicators										
Total Floorspace (billion square feet)										
Surviving	84.2	85.5	86.8	88.2	89.5	90.9	92.3	93.7	95.2	96.6
New Additions	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3
Total	86.2	87.6	88.9	90.3	91.6	93.1	94.5	96.0	97.5	99.0
Energy Consumption Intensity (thousand Btu per square foot)										
Delivered Energy Consumption	110.4	110.5	110.8	111.1	111.3	111.3	111.2	111.1	111.1	111.1
Electricity Related Losses	128.0	127.9	127.9	128.2	128.5	128.7	128.9	128.7	128.6	128.5
Total Energy Consumption	238.4	238.4	238.8	239.3	239.8	239.9	240.0	239.8	239.7	239.6
Delivered Energy Consumption by Fuel										
Purchased Electricity										
Space Heating 1/	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17
Space Cooling 1/	0.45	0.46	0.46	0.46	0.47	0.47	0.48	0.48	0.49	0.49
Water Heating 1/	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Ventilation	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Lighting	1.24	1.25	1.27	1.29	1.31	1.33	1.34	1.36	1.37	1.39
Refrigeration	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.26	0.26
Office Equipment (PC)	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.29	0.29	0.29
Office Equipment (non-PC)	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69
Other Uses 2/	2.01	2.07	2.12	2.19	2.25	2.31	2.38	2.44	2.51	2.58
Delivered Energy	5.22	5.32	5.43	5.55	5.66	5.78	5.89	6.01	6.13	6.25
Natural Gas										
Space Heating 1/	1.36	1.38	1.40	1.42	1.44	1.45	1.46	1.47	1.48	1.50
Space Cooling 1/	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Water Heating 1/	0.57	0.58	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67
Cooking	0.30	0.31	0.32	0.32	0.33	0.34	0.34	0.35	0.35	0.36
Other Uses 3/	1.10	1.11	1.13	1.15	1.16	1.17	1.18	1.19	1.21	1.22
Delivered Energy	3.35	3.40	3.46	3.52	3.57	3.61	3.64	3.68	3.73	3.77
Distillate										
Space Heating 1/	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.24
Water Heating 1/	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Other Uses 4/	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Delivered Energy	0.49	0.49	0.49	0.49	0.50	0.50	0.50	0.50	0.50	0.50
Marketed Renewables (biomass)										
Other Fuels 5/	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Delivered Energy Consumption by End Use										
Space Heating 1/	1.74	1.76	1.79	1.81	1.83	1.84	1.85	1.87	1.88	1.90

Table 5. Commercial Sector Key Indicators and Consumption
 (quadrillion Btu, unless otherwise noted)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Space Cooling 1/	0.47	0.47	0.48	0.48	0.49	0.49	0.50	0.51	0.51	0.52
Water Heating 1/	0.78	0.79	0.80	0.82	0.83	0.84	0.85	0.87	0.88	0.89
Ventilation	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19
Cooking	0.34	0.34	0.35	0.36	0.36	0.37	0.37	0.38	0.38	0.39
Lighting	1.24	1.25	1.27	1.29	1.31	1.33	1.34	1.36	1.37	1.39
Refrigeration	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.26	0.26
Office Equipment (PC)	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.29	0.29	0.29
Office Equipment (non-PC)	0.52	0.54	0.55	0.57	0.59	0.61	0.63	0.65	0.67	0.69
Other Uses 6/	3.78	3.85	3.93	4.00	4.08	4.16	4.23	4.31	4.39	4.47
Delivered Energy	9.52	9.68	9.85	10.03	10.20	10.35	10.50	10.66	10.82	10.99
Electricity Related Losses	11.04	11.20	11.37	11.57	11.77	11.97	12.18	12.35	12.53	12.72
Total Energy Consumption by End Use										
Space Heating 1/	2.08	2.10	2.13	2.15	2.17	2.18	2.20	2.21	2.22	2.24
Space Cooling 1/	1.43	1.43	1.44	1.45	1.46	1.47	1.49	1.50	1.51	1.52
Water Heating 1/	1.08	1.10	1.11	1.13	1.14	1.16	1.17	1.18	1.19	1.20
Ventilation	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.57	0.58	0.58
Cooking	0.40	0.41	0.42	0.42	0.43	0.43	0.44	0.44	0.45	0.45
Lighting	3.85	3.89	3.94	3.99	4.03	4.07	4.12	4.15	4.18	4.22
Refrigeration	0.73	0.73	0.74	0.75	0.75	0.76	0.77	0.78	0.78	0.79
Office Equipment (PC)	0.78	0.80	0.82	0.83	0.85	0.87	0.88	0.88	0.89	0.89
Office Equipment (non-PC)	1.62	1.67	1.71	1.76	1.82	1.87	1.93	1.98	2.04	2.10
Other Uses 6/	8.04	8.20	8.37	8.56	8.76	8.95	9.14	9.33	9.52	9.72
Total	20.56	20.88	21.23	21.60	21.97	22.33	22.68	23.02	23.36	23.71
Non-Marketed Renewable Fuels										
Solar 7/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

Table 5. Commercial Sector Key Indicators and Consumption
 (quadrillion Btu, unless otherwise noted)

	2023	2024	2025	2026	2027	2028	2029	2030	2004-2030
Key Indicators									
Total Floorspace (billion square feet)									
Surviving	98.1	99.7	101.2	102.8	104.4	106.0	107.7	109.4	1.6%
New Additions	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	1.1%
Total	100.5	102.1	103.7	105.3	106.9	108.6	110.3	112.0	1.6%
Energy Consumption Intensity (thousand Btu per square foot)									
Delivered Energy Consumption	111.1	111.0	111.0	111.0	110.9	111.0	111.1	111.0	0.0%
Electricity Related Losses	128.5	128.6	128.5	128.3	128.2	128.0	127.7	127.5	0.2%
Total Energy Consumption	239.6	239.6	239.5	239.3	239.1	239.0	238.8	238.6	0.1%
Delivered Energy Consumption by Fuel									
Purchased Electricity									
Space Heating 1/	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.7%
Space Cooling 1/	0.50	0.51	0.51	0.52	0.53	0.53	0.54	0.55	1.1%
Water Heating 1/	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.5%
Ventilation	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21	1.0%
Cooking	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	-0.1%
Lighting	1.41	1.42	1.44	1.46	1.47	1.49	1.51	1.52	1.2%
Refrigeration	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.29	1.3%
Office Equipment (PC)	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	3.0%
Office Equipment (non-PC)	0.71	0.74	0.76	0.78	0.81	0.84	0.86	0.89	4.1%
Other Uses 2/	2.65	2.72	2.80	2.87	2.95	3.03	3.11	3.19	2.9%
Delivered Energy	6.38	6.51	6.63	6.77	6.90	7.05	7.20	7.34	2.2%
Natural Gas									
Space Heating 1/	1.51	1.52	1.53	1.54	1.56	1.57	1.58	1.60	1.1%
Space Cooling 1/	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	4.3%
Water Heating 1/	0.69	0.70	0.71	0.72	0.73	0.74	0.75	0.76	1.3%
Cooking	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.40	1.7%
Other Uses 3/	1.23	1.24	1.25	1.26	1.28	1.29	1.30	1.32	0.8%
Delivered Energy	3.81	3.85	3.89	3.93	3.98	4.02	4.07	4.11	1.1%
Distillate									
Space Heating 1/	0.24	0.24	0.24	0.24	0.24	0.25	0.25	0.25	1.0%
Water Heating 1/	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	-0.1%
Other Uses 4/	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	-0.7%
Delivered Energy	0.50	0.51	0.51	0.51	0.51	0.51	0.52	0.52	0.1%
Marketed Renewables (biomass)									
Other Fuels 5/	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.0%
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.2%
Delivered Energy Consumption by End Use									
Space Heating 1/	1.92	1.93	1.94	1.96	1.97	1.99	2.01	2.02	1.0%

Table 5. Commercial Sector Key Indicators and Consumption
 (quadrillion Btu, unless otherwise noted)

	2023	2024	2025	2026	2027	2028	2029	2030	2004-2030
Space Cooling 1/	0.53	0.53	0.54	0.55	0.56	0.57	0.58	0.58	1.2%
Water Heating 1/	0.90	0.91	0.93	0.94	0.95	0.96	0.98	0.99	1.1%
Ventilation	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21	1.0%
Cooking	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.43	1.5%
Lighting	1.41	1.42	1.44	1.46	1.47	1.49	1.51	1.52	1.2%
Refrigeration	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.29	1.3%
Office Equipment (PC)	0.29	0.30	0.30	0.30	0.30	0.30	0.30	0.30	3.0%
Office Equipment (non-PC)	0.71	0.74	0.76	0.78	0.81	0.84	0.86	0.89	4.1%
Other Uses 6/	4.56	4.64	4.72	4.81	4.90	4.99	5.09	5.19	1.7%
Delivered Energy	11.16	11.33	11.50	11.68	11.86	12.05	12.25	12.44	1.6%
Electricity Related Losses	12.92	13.12	13.32	13.51	13.70	13.90	14.09	14.29	1.7%
Total Energy Consumption by End Use									
Space Heating 1/	2.26	2.27	2.29	2.30	2.32	2.33	2.35	2.37	0.9%
Space Cooling 1/	1.54	1.56	1.57	1.59	1.60	1.62	1.64	1.66	0.9%
Water Heating 1/	1.22	1.23	1.24	1.25	1.26	1.28	1.29	1.30	0.8%
Ventilation	0.59	0.59	0.60	0.61	0.61	0.62	0.62	0.63	0.7%
Cooking	0.46	0.46	0.46	0.47	0.47	0.48	0.48	0.49	1.2%
Lighting	4.26	4.29	4.33	4.36	4.40	4.43	4.47	4.49	1.0%
Refrigeration	0.80	0.81	0.82	0.82	0.83	0.84	0.85	0.86	1.0%
Office Equipment (PC)	0.89	0.89	0.89	0.90	0.89	0.89	0.89	0.89	2.7%
Office Equipment (non-PC)	2.16	2.22	2.29	2.35	2.42	2.49	2.56	2.63	3.8%
Other Uses 6/	9.92	10.13	10.34	10.54	10.76	10.97	11.18	11.41	2.1%
Total	24.08	24.46	24.82	25.19	25.56	25.95	26.34	26.73	1.7%
Non-Marketed Renewable Fuels									
Solar 7/	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	1.6%

Table 5. Commercial Sector Key Indicators and Consumption
(quadrillion Btu, unless otherwise noted)

1/ Includes fuel consumption for district services.
2/ Includes miscellaneous uses, such as service station equipment, automated teller machines, telecommunications equipment, and medical equipment.
3/ Includes miscellaneous uses, such as pumps, emergency electric generators, combined heat and power in commercial buildings, and manufacturing performed in commercial buildings.
4/ Includes miscellaneous uses, such as cooking, emergency electric generators, and combined heat and power in commercial buildings.
5/ Includes residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.
6/ Includes miscellaneous uses, such as service station equipment, automated teller machines, telecommunications equipment, medical equipment, pumps, emergency electric generators, combined heat and power in commercial buildings, manufacturing performed in commercial buildings, and cooking (distillate), plus residual fuel oil, liquefied petroleum gas, coal, motor gasoline, and kerosene.
7/ Includes primary energy displaced by solar thermal space heating and water heating, and electricity generation by solar photovoltaic systems.
N/A = Not applicable.
Btu = British thermal unit.
PC = Personal computer.
Note: Totals may not equal sum of components due to independent rounding. Data for 2003 and 2004 are model results and may differ slightly from official EIA data reports.
Source: 2003 and 2004 based on: Energy Information Administration (EIA), Annual Energy Review 2004, DOE/EIA-0384(2004) (Washington, DC, August 2005).
Projections: EIA, AEO2006 National Energy Modeling System run aeo2006.d111905a.